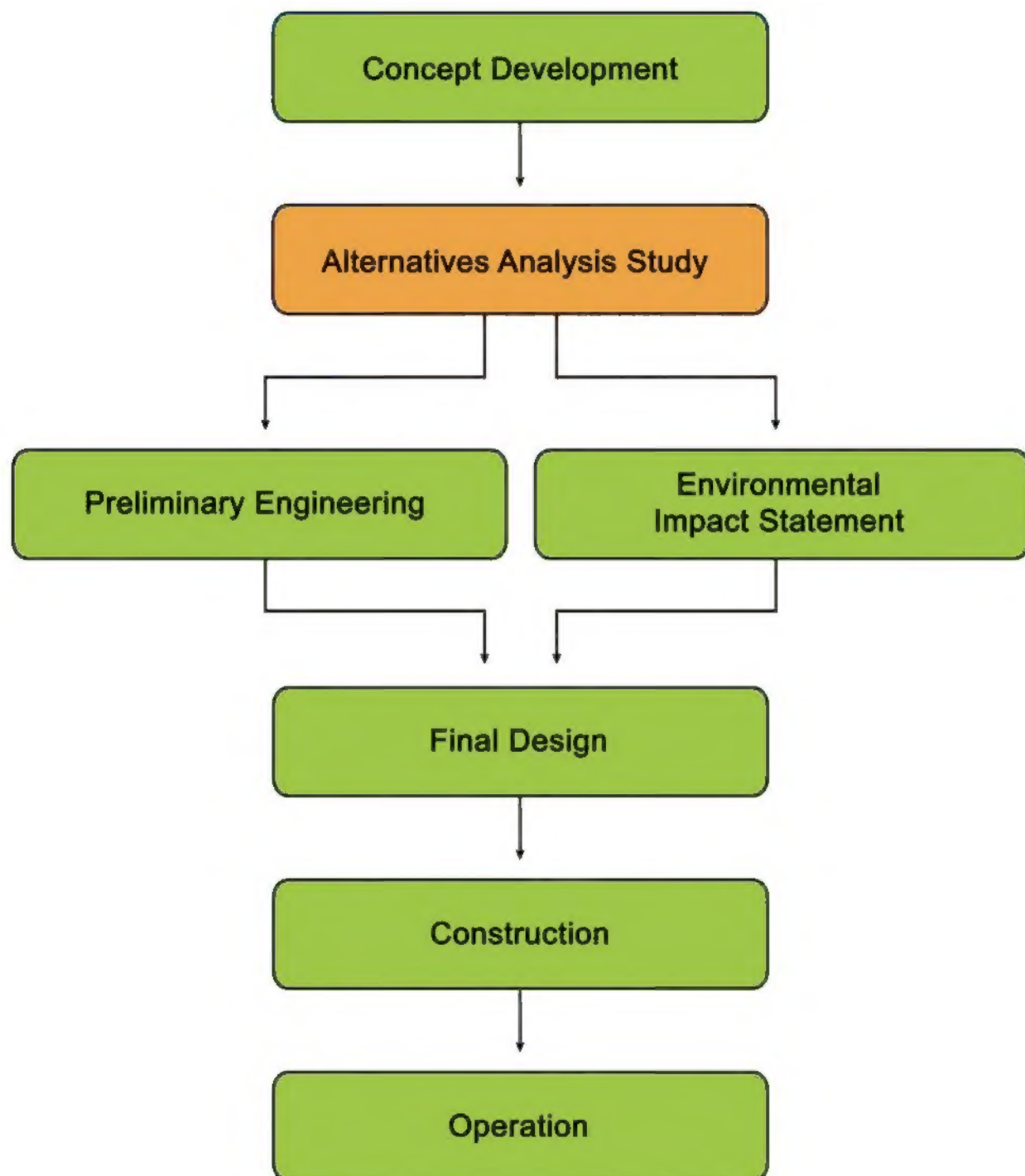


FTA's New Starts Process



**Orange Line Extension
Alternative Analysis Study**



Purpose and Need

Transportation Needs

- Relieve roadway, bus and passenger congestion at Midway Airport Orange Line Station
- Better accommodate tremendous growth in employment opportunities along Cicero Avenue and air travel at Midway since the opening of the Orange Line in 1993
- Reduce lengthy bus trips to access Orange Line
- Alleviate traffic congestion due to expected growth in study area population and employment

Opportunity for Improvement

- Extend rapid transit service south from Midway Airport Orange Line Terminal
- Improve access to, within, and beyond study area
- Support economic development and job opportunities
- Shorten transit travel times through faster and more direct routings



Community Participation

Community participation is one of the key components of the alternatives analysis.

Community Outreach

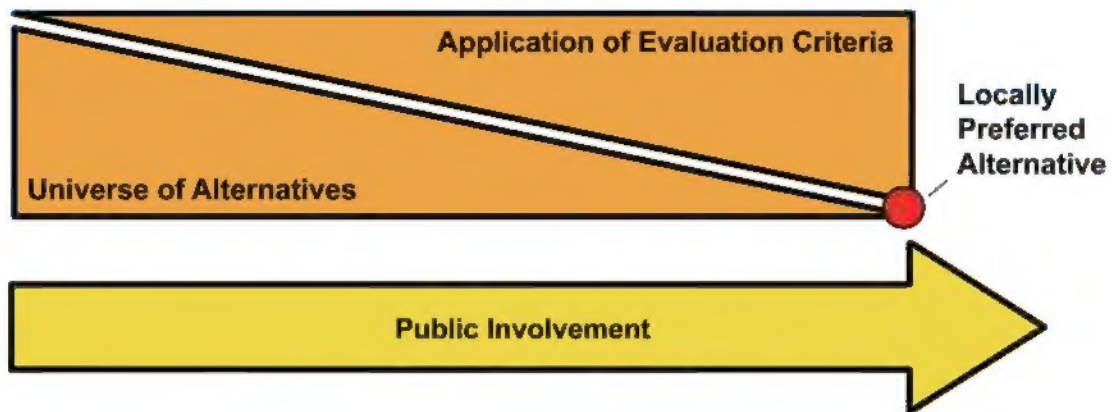
- General Public
- Elected and Appointed Officials
- Community and Civic Organizations
- Local and State Agencies

Ongoing Public Involvement / Input

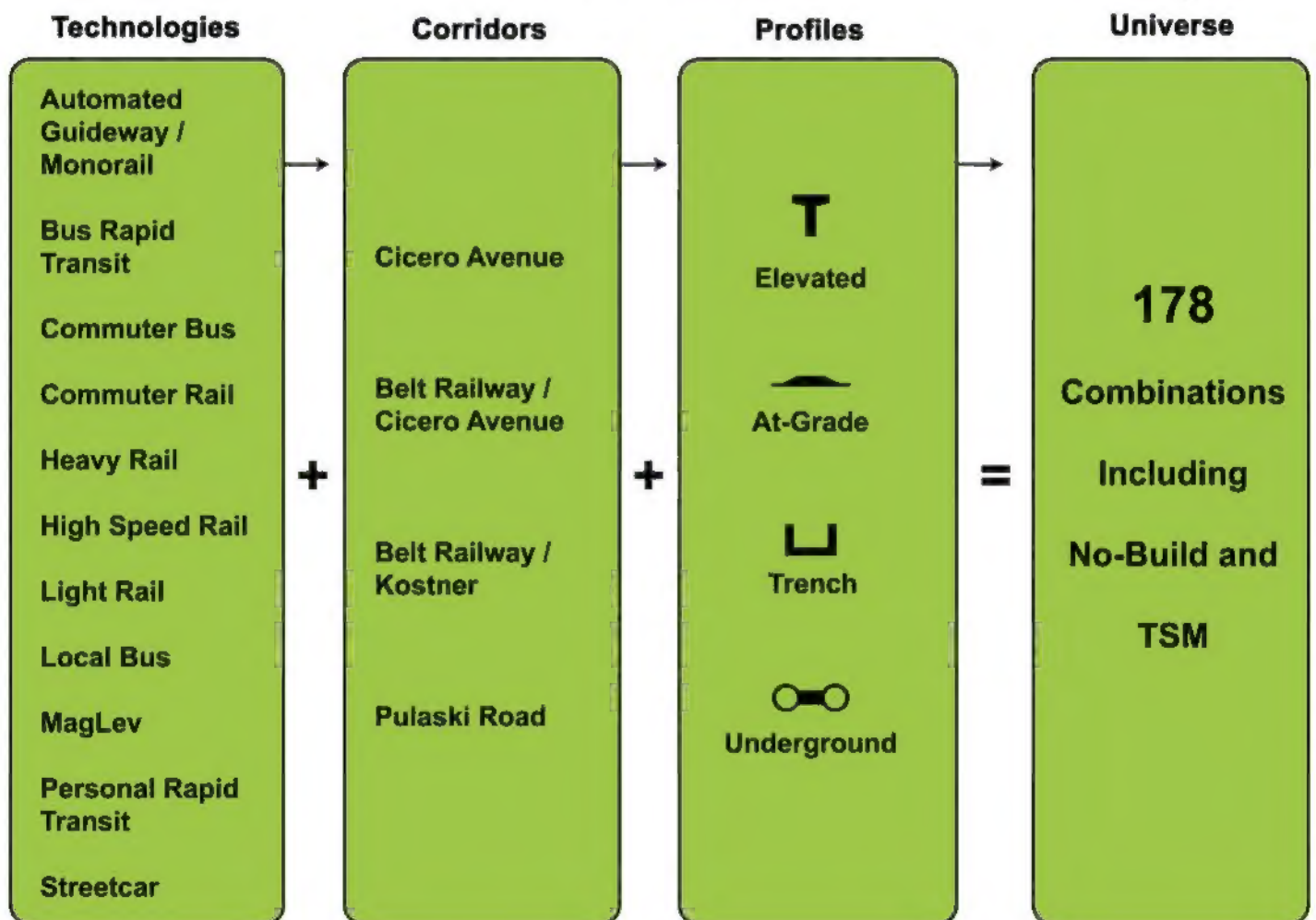
- Meetings announced through public notices and advertisements
- Project updates on the CTA web site:
www.transitchicago.com, accessible at local public libraries



Alternatives Analysis Process



Screen 1 Process



Technologies Evaluated



Automated Guideway/Monorail

- Service Area: Airports, theme parks, circulators, ½ to 5 miles
- Typical Speeds: 15 to 30 mph
- Station Spacing: ½ to 2 miles



Bus Rapid Transit

- Service Area: Urban and suburban uses, 1 to 10 miles or more
- Typical Speeds: 15 to 25 mph
- Station Spacing: ¼ to 1 mile



Commuter Bus

- Service Area: Suburbs to city, 15 to 100 miles
- Typical Speeds: 30 to 50 mph
- Station Spacing: 3 to 7 miles, or at end points



Commuter Rail

- Service Area: Suburbs to city, 15 to 100 miles
- Typical Speeds: 30 to 50 mph
- Station Spacing: 3 to 7 miles



Technologies Evaluated



Heavy Rail

- Service Area: Urban uses and loadings, 1 to 10 miles or more
- Typical Speeds: 25 to 40 mph
- Station Spacing: ¼ mile downtown, up to 2 miles in neighborhoods



High Speed Rail

- Service Area: Intercity, 150 to 300 miles
- Typical Speeds: 110 to 186 mph
- Station Spacing: 20 to 50 miles



Light Rail

- Service Area: Urban or suburban uses, 1 to 10 miles or more
- Typical Speeds: 15 to 25 mph
- Station Spacing: ¼ to 1 mile



Local Bus

- Service Area: Urban and suburban uses, ½ to 5 miles
- Typical Speeds: 10 mph
- Station Spacing: 2 to 4 blocks



Technologies Evaluated



MagLev

- Service Area: Intercity, 100 to 300 miles
- Typical speeds: 250 to 340 mph
- Station Spacing: 20 to 50 miles



Personal Rapid Transit

- Service Area: Small area networks or campuses, 1 to 5 miles
- Typical Speeds: 15 mph
- Station Spacing: ¼ to 1 mile

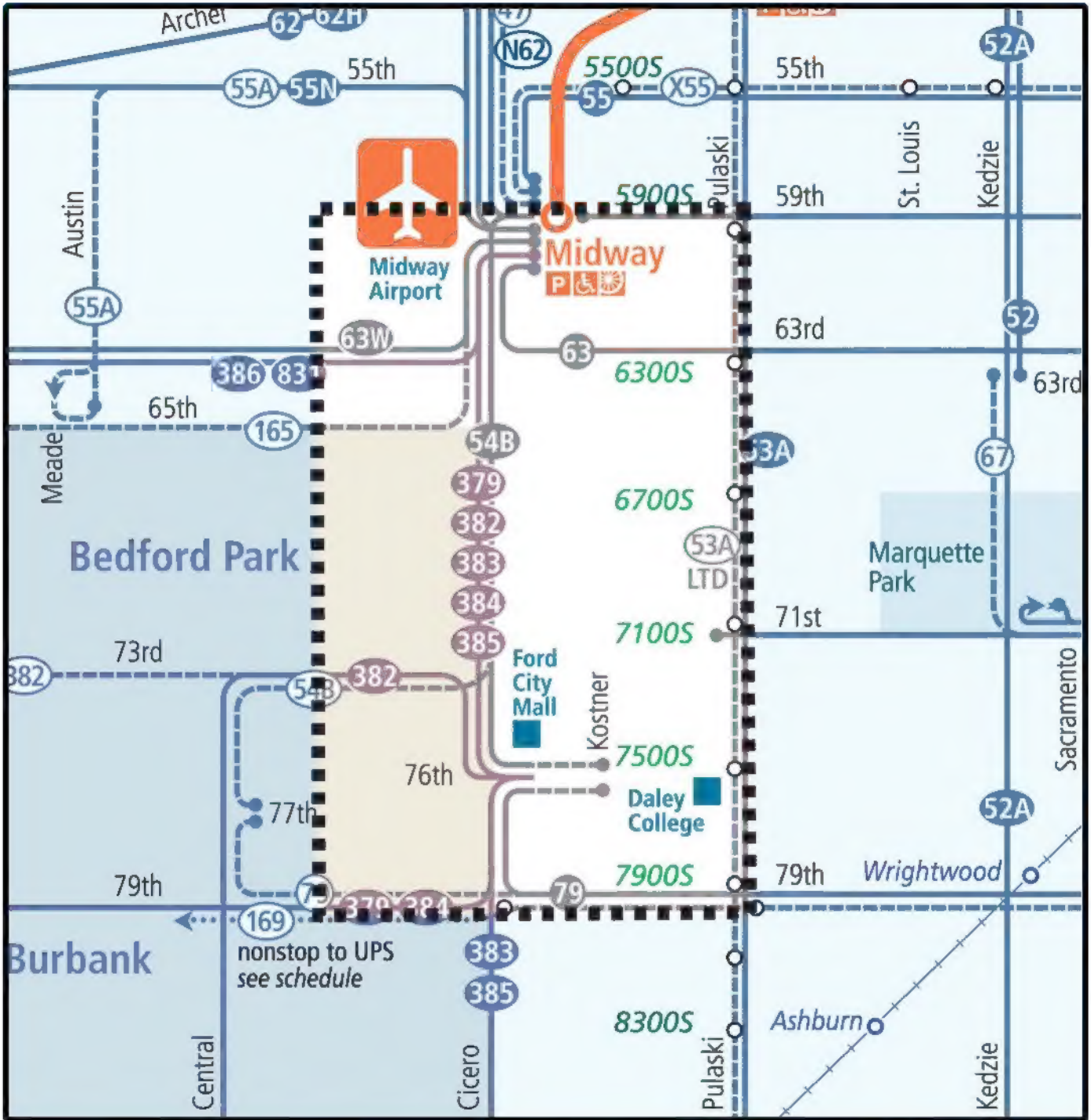


Streetcar

- Service Area: Urban and suburban streets, ½ to 6 miles
- Typical Speeds: 10 mph
- Station Spacing: 2 to 4 blocks



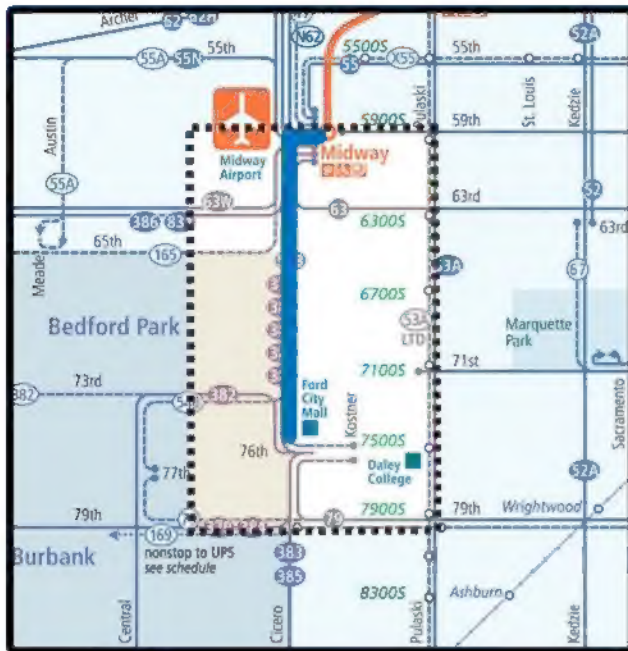
Study Area



Orange Line Extension Alternative Analysis Study



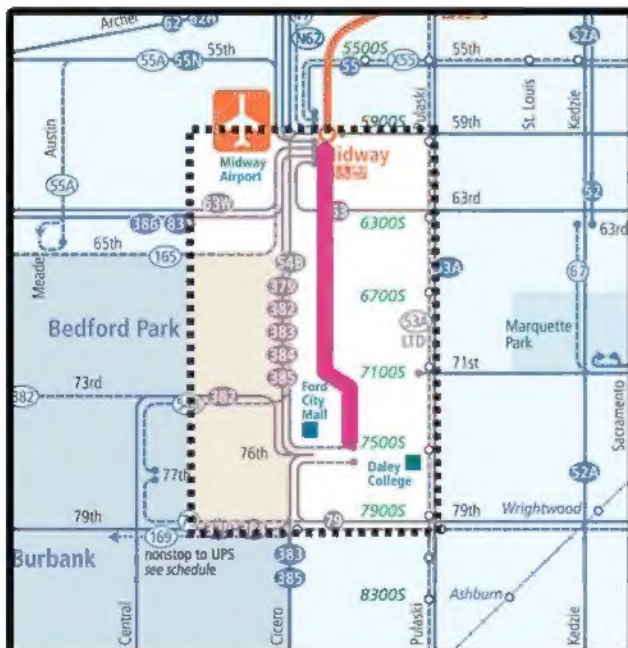
Corridors Evaluated



Cicero Avenue Corridor



Belt Railway / Cicero Avenue Corridor



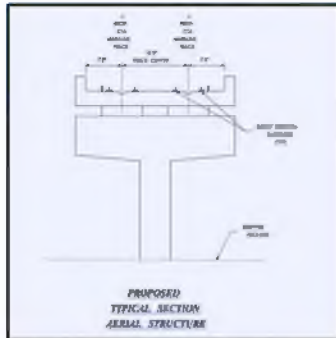
Belt Railway / Kostner Corridor



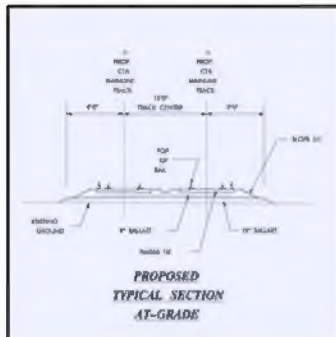
Pulaski Road Corridor



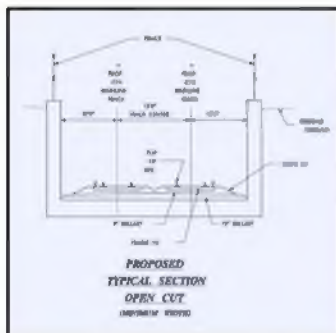
Profiles Evaluated



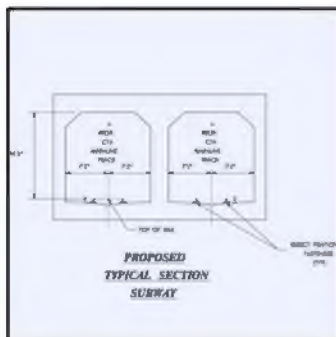
T
Elevated



At Grade



Trench



Underground

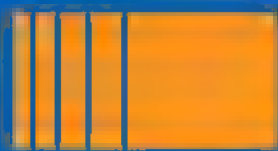


Step 1:

Technology Evaluation

Technology	Does Mode Meet the Measure of Effectiveness?				Advance for Further Screening?
	Length of Commute	Typical Station Spacing	Operating Speed	System Applicability	
Automated Guideway	●	●	●	●	YES
Bus Rapid Transit	●	●	●	●	YES
Commuter Bus	X	X	●	●	NO
Commuter Rail	X	X	X	X	NO
Heavy Rail Rapid Transit	●	●	●	●	YES
High Speed Rail	X	X	X	X	NO
Light Rail Transit	●	●	●	●	YES
Local Bus	●	X	X	●	NO
MagLev	X	X	X	X	NO
Personal Rapid Transit	●	●	●	X	NO
Streetcar	●	X	X	●	NO

● Yes X No




**Orange Line Extension
Alternative Analysis Study**



Step 2:

Technology & Profile Evaluation

Technology	Profile	Air Quality	System Capacity	Travel Time	Compatibility	Traffic	Project Cost	Advance for Further Screening?
Automated Guideway Transit 	Elevated	○	○	○	-	+	○	NO
	Trench	○	○	○	-	○	○	NO
	Underground	○	○	○	-	+	-	NO
Bus Rapid Transit 	Elevated	○	○	○	○	+	○	YES
	At-Grade	○	○	-	+	○	+	YES
	Trench	○	○	○	○	○	○	NO
	Underground	○	○	○	○	+	-	NO
Heavy Rail Transit 	Elevated	○	+	+	+	+	○	YES
	Trench	○	+	+	+	○	○	YES
	Underground	○	+	+	+	+	-	YES
Light Rail Transit 	Elevated	○	○	○	-	+	○	NO
	At-Grade	○	○	-	-	-	+	NO
	Trench	○	○	○	-	○	○	NO
	Underground	○	○	○	-	+	-	NO

+ Better than other alternatives ○ Comparable to other alternatives - Worse than other alternatives







**Orange Line Extension
Alternative Analysis Study**



Step 3:

Corridor Evaluation

Criteria \ Corridor	Land Use	Neighborhood	Under-served Population	Transit Usage	Accessibility	Advance for Further Screening?
Cicero Avenue 	+	-	○	+	○	YES
Belt Railway / Cicero Avenue 	+	○	○	+	○	YES
Belt Railway / Kostner Avenue 	+	○	○	+	○	YES
Pulaski Road 	○	+	○	-	○	NO

+ Better than other alternatives ○ Comparable to other alternatives - Worse than other alternatives



**Orange Line Extension
Alternative Analysis Study**



Step 4:

Combined Evaluation

Technology	Profile	Recommended to Advance for Detailed Evaluation		
		Cicero Avenue	Belt Railway / Cicero Avenue	Belt Railway / Kostner Avenue
Bus Rapid Transit 	Elevated	NO	NO	NO
	At-Grade	YES	NO	NO
Heavy Rail Transit 	Elevated	NO	NO	NO
	Trench	NO	NO	NO
	Elevated / Trench	NO	YES	YES
	Underground	NO	NO	NO



**Orange Line Extension
Alternative Analysis Study**

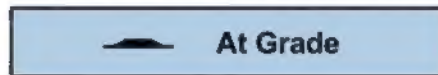


Preliminary Findings

Bus Rapid Transit



Cicero Avenue Corridor



Heavy Rail Transit



Belt Railway / Cicero Corridor



Belt Railway / Kostner Corridor



**Orange Line Extension
Alternative Analysis Study**

